**Homework 52H** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve Right Triangles** Period:\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Failure to show all work and write in complete sentences will result in LaSalle!

**Directions #1-4:** Solve the right triangle (find all sides and angles). Round decimal answers to the nearest tenth.

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| 1) | 2) |
| 3) The angle of depression from the top of a 320 foot office building to the top of a 200 foot office building is 55°. How far apart are the buildings? | 4) Use the diagram to find the distance across the suspension bridge. |
| 5) The Uniform Federal Accessibility Standards specify that the ramp angle used for a wheelchair ramp must be less than or equal to 4.78°.    a. The length of one ramp is 16 feet. The vertical rise is 14 inches. Estimate the ramp's horizontal distance and its ramp angle. Does this ramp meet the Uniform Federal Accessibility Standards?  b. You want to build a ramp with a vertical rise of 6 inches. You want to minimize the horizontal distance taken up by the ramp. Draw a sketch showing the approximate dimensions of your ramp. | 6) You are in a hot air balloon that is 600 feet above the ground where you can see two people.    a. If the angle of depression from your line of sight to the person at *B* is 30°, how far is the person from the point on the ground below the hot air balloon?  b. If the angle of depression from your line of sight to the person at *C* is 20°, how far is the person from the point on the ground below the hot air balloon?  c. How far apart are the two people? |